Venesse Air Curtain

[◖◗] Water heater

[⤴] Electric heater

[∼] Air-only

[↓] Opening width of up to 3m

Features

● One power series, for openings up to 3m in width
● Nominal air curtain length 2.5m
● Water heater, electrical wire heater or air only version
● Electronic remote control with LED signals
● Universal double-sided design
● 24-month warranty

Venesse air curtains are designed for the barrier free separation of two areas with differing climatic conditions.

These air curtains are particularly suitable for installation in shopping centres, banks, hotels, restaurants, administrative buildings and so on. The air curtain should be used in an environment free of rough dust, grease, chemical fumes and other impurities.

The Venesse is available in white RAL 9010 as standard but is available in stainless steel or any RAL colour on request.

Primary parameters

● The air curtain should be installed indoors in a dry area with ambient temperatures ranging from 0°C up to +40°C with a relative humidity up to 80%.

● The IP rating of the air curtain is IP20.

● All air curtains with electric heaters are fitted with a safety thermostat with automatic reset and an emergency thermostat with a manual reset.

● The warm-water exchangers are designed for a maximum operating temperature of +100°C and a maximum operating pressure of 1.6MPa.

Venesse Air Curtain

Air curtain type	Door width* (Two-sided installation) [m]	Air capacity [m³/h]	Noise** [dB(A)]	Heater power [kW]	Heater voltage/current [V/A]	Fan voltage/current [V/A]	Weight [kg]
VCV-B-25S	3 (6)	5500	56.0	-	-	230/6.5	95
VCV-B-25E		5400	55.5	24.0	400/33.5	230/6.5	103
VCV-B-25F		5400	55.5	36.0	400/50	230/6.5	103
VCV-B-25W		5100	55.0	41.1***	-	230/6.5	104

*   Limited distance when air flow speed decreases to 2 m/s. Applies to the highest capacity type under optimum conditions.
**   Sound pressure measured 3 m from the air curtain intake.
*** At the temperature gradient of 90/70 and temperature of intake air equal to +18 °C.

Electric heater parameters

Air curtain type	Air capacity [m³/h]	Heater power [kW]	Outlet temperature △t [°C]
VCV-B-25E	5400	24	13.33
VCV-B-25F	5400	36	20.00

Water exchanger parameters for water temperature gradient of 80/60°C

Air curtain type	Air capacity [m³/h]	Heater power [kW]	Outlet temperature [°C]	Water flow [l/s]	Water pressure loss [kPa]
VCV-B-25W	5100	33.8	37.6	0.41	7.0

• Temperature of intake air: +18 °C

Water exchanger parameters for water temperature gradient of 82/71°C

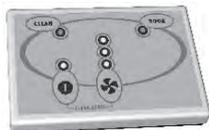| Air curtain type	Air capacity [m³/h]	Heater power [kW]	Outlet temperature [°C]	Water flow [l/s]	Water pressure loss [kPa]
VCV-B-25W	5100	41.16	42	0.88	28

• Temperature of intake air: +18 °C

Air curtain dimensions

130
75
45
2457
300
606
51
521

Anchor console dimensions

53
100
300
67
90
180
288
72
40
5x ⌀12
9
130
212
521

Installation and assembly

- The air curtain should be installed in a vertical position only.

- The air curtain should be located as close to the side of the doorway as possible, see figure 2.

- To create an effective air barrier, it is recommended that the air curtain is higher than the door opening (optimally 100mm) see illustration 2

- Correct operation of the air curtain requires that specified distances from the surrounding objects are observed.

- Position of LPHW and power supply connections should be taken into consideration during installation.

Minimum distance from solid construction   1.

Door opening
Türöffnung
Min. 50 mm
Min. 200 mm
service hood
Servicedeckel

2.

Min. 50 mm
Min. 100 mm
Door opening
Min. 200 mm

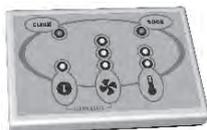## Control

VENESSE Comfort air curtains are operated by a remote control that is connected to the air curtain by a communication cable. VENESSE Comfort air curtains can be connected and operated from a building's central control system using an RS 485 interface. For more information on how to connect an air curtain to a building's central control system, contact your supplier

DM
(Air curtain with water heater or without heater)

DM
(Air curtain with electric heater)

	Type of controller	Manual	Manual
	Regulation of air output	3 speeds	3 speeds
	Regulation of electric heater	NO	2 levels
	Possibility of connecting a door contact	YES	YES
°C	Connection of a special thermostat	YES (one of the mentioned items only)	YES (one of the mentioned items only)
	Connection of a timer		
CLEAN	Air curtain cleaning interval indication based on operating hours	YES	YES
DOOR	Door switch state indication	YES	YES
	Aftercooling electric heater	NO	30 s
1 2..	Chaining air curtains	Up to 6	Up to 6
	Light indication of selected function	YES	YES
	Controller connection to air curtain	Low-voltage cable (12 V) with max. length of 50 m	Low-voltage cable (12 V) with max. length of 50 m

The controls allow three fan speeds.
Air curtains equipped with electric heaters allow a choice of two heat levels.
On air curtains with water heaters, heat regulation must be provided separately.

Water heater control

The air curtain is not equipped with an integrated water control, this needs to be designed separately.

Basic – by throttling.
TV1 Thermostatic Valve - The valve controls the flow of the warm water supply into the air curtain depending on the temperature of air leaving the air curtain. One valve is required for each air curtain.

Economical – by diverting.
ZV3 Three Way Zone Valve (open/closed) with servo drive - Each ZV3 Zone valve should be selected with either a TER-K (channel thermostat) or TER-P (room thermostat).

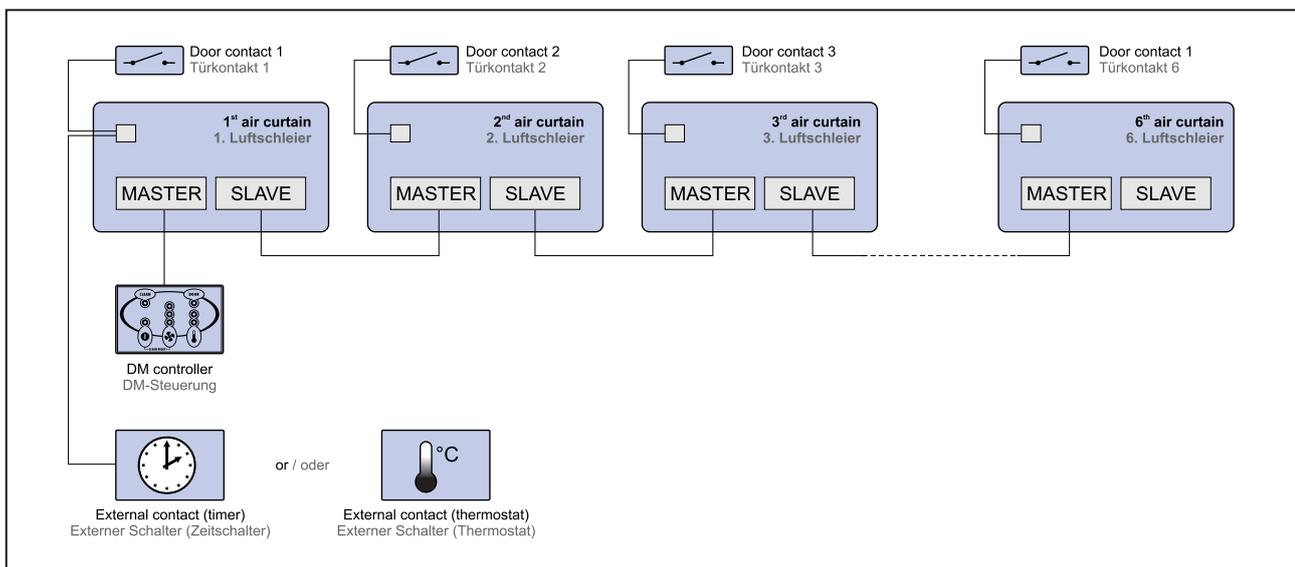The valve switches the warm water supply in to the air curtain and back towards the heat source depending on the temperature of the air leaving the air curtain or depending on the room temperature. One valve is required per air curtain.

Precise – by mixing.
SMU Mixing Point, OSMU-01-6A mixing point controller (max temperature 110°C), P12L1000 channel sensor or P10L1000 room sensor.

The mixing system controls the ratio of supply and return heated water into the air curtain depending on the temperature of air leaving the air curtain and/or depending on the room temperature.

One mixing point may be used for multiple air curtains provided they are an identical length and that the exchangers are connected in a parallel arrangement.

Optional accessories

Connection cable

The communication cable is designed for connecting the DM/DA controller to the air curtain or for interconnecting chained air curtains.

The standard length of the cable delivered with the air curtain is 5m. Other lengths are available based on the coding key provided opposite.

KABEL-05M

03, **05**, **08**, **10**, **15**, **20**, **30**, **40** - cable length in m (unless otherwise stated in the order, the cable is a standard 5m) Maximum cable length is 50m.

KABEL - connection cable

Three-way valve with servo drive
ZV-3

Flexible connection hoses
OH-01-1/1-xxx

Mixing point
SMU-xx-xx

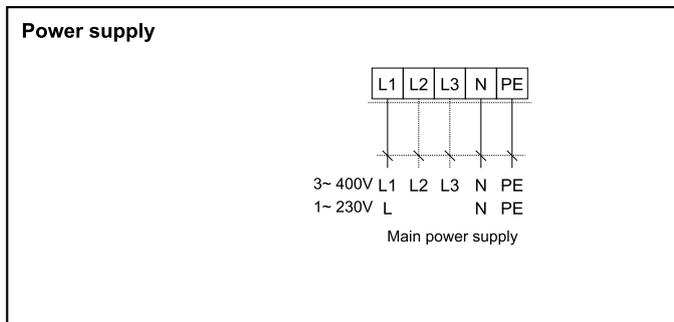**Door switch for air curtains fitted with the DM and DA controls**
DK1

Timer with a weekly program
SH-TM-848

Room thermostat
TER-P

Power supply

L1	L2	L3	N	PE

3~ 400V L1 L2 L3 N PE
1~ 230V L   N PE

Main power supply

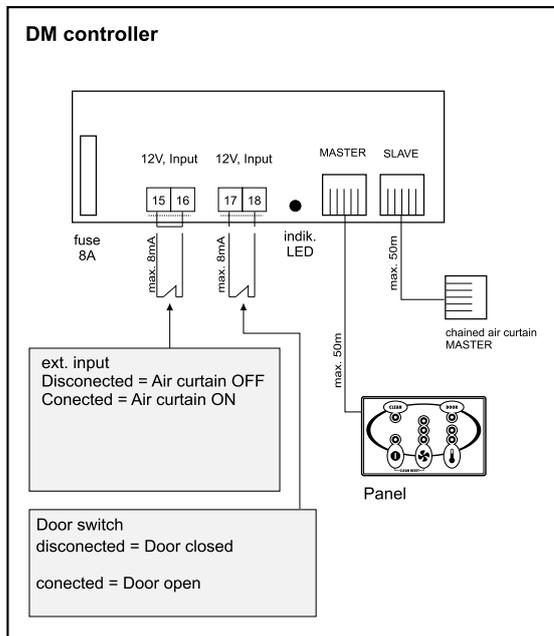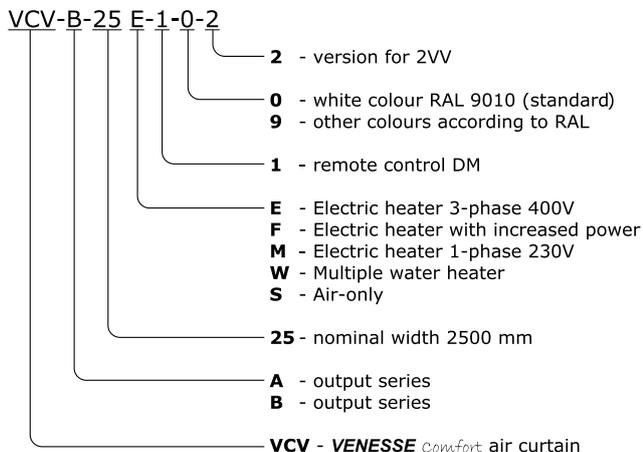## Wiring diagrams

All connection schematics shown in the catalogue are for information only. When assembling the product, follow only the values, instructions and schematics shown on the product itself or delivered with the product.

DM controller

12V, Input   12V, Input   MASTER   SLAVE

| 15 | 16 | | 17 | 18 |

fuse   max. 8mA   max. 8mA   indik.   max. 50m
8A   LED

chained air curtain
MASTER

max. 50m

ext. input
Disconected = Air curtain OFF
Conected = Air curtain ON

Panel

Door switch
disconected = Door closed

conected = Door open

Key to coding

VCV-B-25 E-1-0-2

2 - version for 2VV

0 - white colour RAL 9010 (standard)
9 - other colours according to RAL

1 - remote control DM

E - Electric heater 3-phase 400V
F - Electric heater with increased power
M - Electric heater 1-phase 230V
W - Multiple water heater
S - Air-only

25 - nominal width 2500 mm

A - output series
B - output series

VCV - *VENESSE Comfort* air curtain

JS Air Curtains